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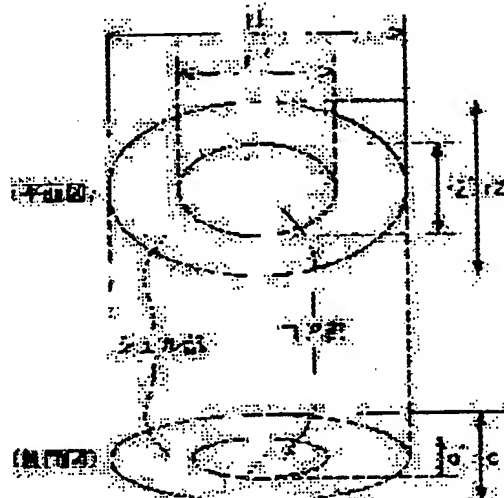
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(54) ELECTROPHOTOGRAPHIC TONER PARTICLES, IMAGE PROCESSING METHOD, IMAGE FORMING METHOD AND IMAGE FORMING DEVICE

(57)Abstract:

PROBLEM TO BE SOLVED: To provide electrophotographic toner particles giving a toner image having roughness inconspicuous particularly in a low density part, having a wide dynamic range and ensuring stable transfer in the case of a multilevel image particularly in digital image formation and capable of forming an image having high maximum density and high sharpness in the case of a non-multilevel image, and to provide an image processing method which is carried out using the toner particles, an image forming method and an image forming device.

SOLUTION: The electrophotographic toner particles comprise flattened colored particles each having a dark part at the central part and a pale part at the peripheral part.



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CLAIMS

[Claim(s)]

[Claim 1] The toner particle for electrophotography characterized by consisting of the coloring particle which has the light section in the center section in a particle at the dark section and its periphery, and carried out flat processing.

[Claim 2] The toner particle for electrophotography according to claim 1 characterized by the ratios of light section concentration / dark section concentration being 0.15–0.35.

[Claim 3] The die length of the side of the light section (shell section) of a toner particle is set to a major axis r_1 , a minor axis r_2 , and thickness d . The toner particle for electrophotography according to claim 1 or 2 characterized by it being 0.6–0.9 any of the ratio (r_1' / r_1 , r_2' / r_2 , d' / d) of each side when making into major-axis r_1' , minor-axis r_2' , and thickness d' the die length of the side where the dark section (core section) corresponds they are.

[Claim 4] It is the toner particle for electrophotography of claim 1–3 which the number mean particle diameter of a toner particle is 4–10 micrometers, and is characterized by the number mean particle diameter of said dark section being 2–7 micrometers given in any 1 term.

[Claim 5] A toner particle is a toner particle for electrophotography given in any 1 term of claims 1–4 characterized by being the particle manufactured by the polymerization method.

[Claim 6] It is the toner particle for electrophotography characterized by being the coloring particle which has the light section in the center section in a particle at the dark section and its periphery, and carried out flat processing, and the dark section and the light section having the same hue.

[Claim 7] At least for a part, the coloring agent used for the dark section and the light section is a toner particle for electrophotography according to claim 6 characterized by having used the common coloring agent and changing the amount of coloring agents.

[Claim 8] The amount of coloring agents used for the light section is a toner particle for electrophotography according to claim 6 or 7 characterized by being ten to 40 mass % to the amount of coloring agents used for the dark section.

[Claim 9] It is the image formation approach which has the light section in the center section in a particle at the dark section and its periphery, and is characterized by developing negatives by the dark section and the light section forming the latent image of the image which carried out digital image processing on an image formation object, using the coloring particle which carried out flat processing which has the same hue as a toner particle.

[Claim 10] The image-processing approach characterized by performing multiple-value conversion in the image processing in the image formation approach according to claim 9.

[Claim 11] Image formation equipment characterized by having the light section in the center section in a particle at the dark section and its periphery, and developing negatives by forming the latent image of the image which carried out digital image processing on an image formation object, using the coloring particle which carried out flat processing as a toner particle.

[Claim 12] The image-processing approach characterized by performing multiple-value conversion in the image processing in an image processing system according to claim 11.
